AMENDMENTS TO THE SPECIFICATION

Please amend paragraphs [0008], [0014], [0028], and [0041] of the Specification as indicated below:

[0008] The invention consists of a tunable continuous wave (CW) laser source, an optical circulator, a ~~an~~ semiconductor optical amplifier (SOA), and a spectral filter that has a very sharp cutoff frequency. In alternative embodiments, the filter may be replaced with an interleaver that passes several wavelengths. A single interleaver may be used by several of the optical regenerators/converters described herein. Each regenerator uses a separate wavelength that is associated with a passband frequency of the single interleaver. An interleaver has a periodic nature in which the blocking and transmitting sections of the spectrum repeat over a pre-specified frequency span, such as every 100 GHz.

[0014] FIGURE 1 is a high-level block diagram of a system incorporating an ~~and~~ embodiment of the present invention;

[0028] Referring again to FIGURE 1, system 100 may be used in an optical network to connect optical fiber links. Input signal 101 has traveled through a portion of the optical network and has become degraded and noisy. Accordingly, input signal 101 needs to be regenerated and possibly converted to a new wavelength. Circulator 106 guides input signal 101 into SOA 105. At the same time, CW signal 104 enters SOA 105. Input signal 101 and CW signal 104 counter-propagate within SOA 105. If input signal 101 has no "1" bits in its content, then it does not ~~effect~~ affect the wavelength of CW light 104 passing through SOA 105. In that case, no light passes out of system 100 because the CW light (108) is blocked by filter 107.